

## SECTION 321024

### NON-STRUCTURAL CONCRETE

#### PART 1 - GENERAL

##### 1.1 WORK INCLUDED

- A. Furnishing and placing of all nonstructural concrete, including thrust blocks (where permitted by NPU), pipe encasement, and pipe support.
- B. Furnishing and placing steel reinforcement.
- C. Furnishing, installing, and removing formwork.

##### 1.2 REFERENCE STANDARDS

###### A. American Concrete Institute (ACI):

- 1. ACI 301 – Specifications for Structural Concrete.

###### B. American Society of Testing and Materials (ASTM):

- 1. ASTM A185 – Welded Steel Wire Fabric for Concrete Reinforcement.
- 2. ASTM A615 – Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- 3. ASTM C33 – Concrete Aggregates.
- 4. ASTM C94 – Ready-Mixed Concrete.
- 5. ASTM C150 – Portland Cement.
- 6. ASTM C1602 – Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete.

##### 1.3 QUALITY ASSURANCE

- A. Concrete work shall conform to all requirements of ACI 301, except as modified herein.

#### PART 2 - PRODUCTS

##### 2.1 MATERIALS

- A. Cement: ASTM C150, Portland Type II.
- B. Fine and Coarse Aggregates: ASTM C33, 3/4-inch maximum size.
- C. Water: Fresh, clean, potable water complying with the requirements of ASTM C1602.
- D. Reinforcing Steel: ASTM A615, Grade 60.
- E. Stirrups and Ties: ASTM A615, Grade 40.
- F. Welded Wire Fabric: ASTM A185.

## 2.2 CONCRETE

- A. Concrete placement exceeding one (1) cubic yard shall be transit mixed conforming to ASTM C94.
- B. Concrete shall have a minimum compressive strength of 2,500 psi at 28 days, unless specified otherwise.
- C. Slump: Five (5") inches maximum.

## PART 3 – EXECUTION

### 3.1 PREPARATION

#### A. General

1. Thoroughly clean all areas to ensure proper placement and bonding of concrete. Remove all wood scraps and debris from the areas in which concrete will be placed.
2. Thoroughly oil or wet (except in freezing weather) the forms; remove all standing water.
3. Earth subgrades to receive concrete shall be clean, undisturbed surfaces, free from mud, debris, and standing or running water.

### 3.2 FORMS

- A. Forms shall be soundly built, tied, and properly aligned.

### 3.3 NOTIFICATION

- A. Notify the NPU/City at least 24 hours before placing concrete.

3.4 THRUST BLOCKS

- A. Thrust blocks (if allowed by the NPU/City) shall be formed and cast in place in accordance with NPU Standard Details and shown on the Construction Plans.

END OF SECTION